It thus includes all bead limitations of claim 1.

The spatial encoding principle we claim is very much different from the spectral encoding principle disclosed by Frankel.

In particular, we cite in claim 1 a polymer matrix ("bead") comprising particles with a diameter of less than 30 microns. In contrast, Frankel discloses beads comprising:

> -planar disc shaped electromagnetic spectrum emitters of thickness 80-250 microns and diameter 100-1000 microns (see e.g., US 6,506,342 B1, col. 18, l.48-53; col. 19, l.51-54; col. 20, l.13; col. 20, l.45-46; col. 20, l50-51; col. 20, l.63-65), or
>
> -rectangular electromagnetic spectrum emitters of dimensions in the range 10 x 50 x 600 to 10 x 50 x 1000 microns (US 6,506,342 B1, col. 25, l.63-64; col. 26, l.44-45), or
>
> -electromagnetic spectrum emitters comprising spherical microcavities with diameters in the range of from 5 to 20 microns (US 6,506,342 B1, col. 27, .53-54).

The bead e.g. illustrated in Fig. 16 and described in col. 27 in US 6,506,342 B1 represents a different coding principle as compared to our invention. Our beads comprise particles, whereas Frankel's beads as e.g. illustrated in Fig. 16 comprise cavities. Frankels code as illustrated in Fig. 16 will only work with cavities and not with particles. In further embodiments, Frankel discloses electromagnetic spectrum emitters which have a diameter larger than the maximum, 30 micron particle diameter we cite in claim 1.

Hence, we respectfully contend that the holding of a posteriori lack of unity is improper, and thus groups I-IX should be examined.

With respect to group X, the preamble of claim 93 recites:

> A device for recording and storing at least one image of at least one spatially encoded bead of the composition of different, spatially encoded beads according to claim 32, said device comprising...

Admittedly, the device doesn't include the beads of claim 1. However, it is used to image the beads, and thus provides a "corresponding special technical feature". The Examiner's attention is respectfully directed to the PCT Administrative Instructions, Annex B, Part 2, Examples 8 (plug and socket), 9 (transmitter and receiver), 14 (marking device and apparatus for applying it).

3. In response to the species restriction, the only restriction applied to the elected group II is II-a, "a species of bead number" (claims 33-37). In response, applicants elect with traverse "at least 10^2 individually identifiable beads), with traverse.

4. The species restriction is traversed on the ground that generic claims are allowable. Of the group II claims (32-42), claims 32 and 38-42 are generic since they don't limit the number of individually identifiable beads.

It is further noted that claims 32-37 are not mutually exclusive. For example a composition comprising 10^{10} beads would be covered by all of claims 32-37. (On the other hand, a composition of only 10^2 beads would be covered by claim 32 but not claims 33-37). Hence, since the election is of at least 10^2, which is inclusive of 10^{10}, claims 33-37 should be examined.

5. Since we elected group II, we are not under any obligation to make species elections specific to other groups. Nonetheless, should the examiner rejoin group I, we make the following elections with traverse as generic claims are allowable:

a) Applicant elects essentially monodisperse particles (claim 12).
b) Applicant elects essentially spherical beads (claim 10).
c) Applicant elects from 4 to 10 particles (claim 7).
d) Applicant elects particles having essentially the same diameter (claim 11).
e) Applicant elects spectroscopically detectable marker

(claim 17).

f) Applicant elects marker detected by probing with one or more predetermined frequencies (claim 31).

g) Applicant elects optically transparent polymer (claim 24).

Please call counsel if any of groups III-IX are rejoined, and the appropriate species restrictions thereby become relevant.

Respectfully submitted,

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